Fine hair borders arm, inner angle of wrist, prehensile margins of fingers; a small patch at middle of inner surface of palm; long hair on lower margin of carapace, margin of abdomen and surface of maxilliped; a row of short thin hair above edge of rostrum.

Type-locality.—Oahu, from worm tube, Nov. 27, 1931. Holotype in Bishop Museum.

ZOOLOGY.—*A new species of* Cyclops *from the Philippine Islands.*[1]

C. Dwight Marsh, United States National Museum.

The following description is of the mature female.

Cyclops philippinensis, new species

The first segment of the cephalothorax is considerably longer than the remaining part.

The abdomen, Fig. 1, is about two-thirds as long as the cephalothorax. The first segment about equals in length the three following, and its greatest breadth about equals its length. The second, third, and fourth segments gradually diminish in length, the fourth being about one-half as long as the second. The posterior borders of the abdominal segments are very finely dentate.

The branches of the furca about equal the combined length of the third and fourth segments. The lateral setae are situated at about two-thirds the length of the furca. Of the terminal setae, Fig. 3, the first and fourth are nearly equal in length, the fourth being slightly longer. The third seta is longer than the second and is somewhat more than four times the length of the fourth.

The segments of the abdomen and furca are covered with minute pellucid dots. These dots are arranged in transverse lines on the first segment and sometimes on the other segments. The dots are not projections from the surface, and so far as the author knows, are peculiar to this species.

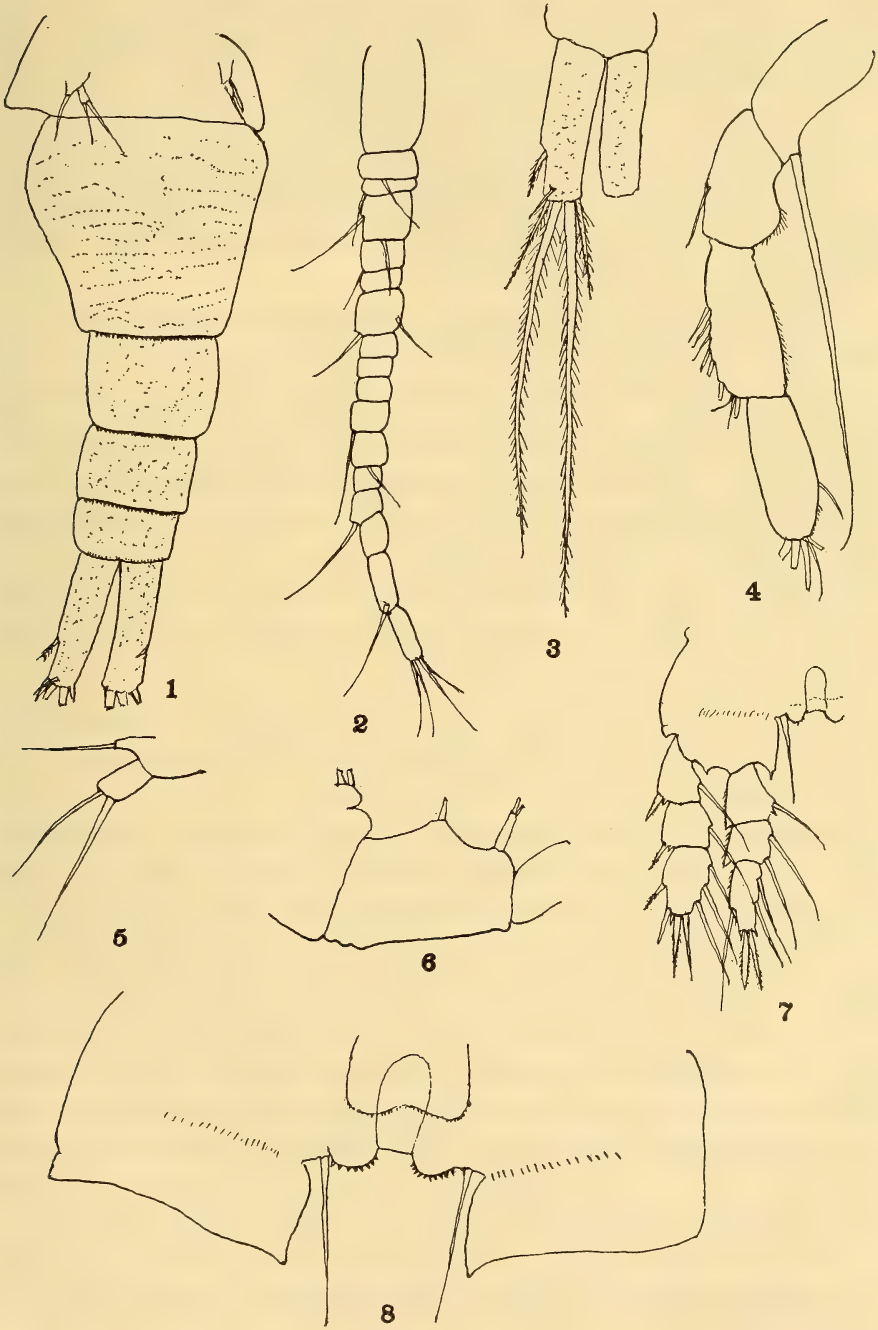
The first antennae, Fig. 2, about equal in length the cephalothorax. They have seventeen segments and there are no hyaline lamellae on the sixteenth and seventeenth segments. In the second antennae, Fig. 4, the third and fourth segments are about equal in length. The lower border of the second segment of the posterior maxillipede has crenulations, Fig. 5, resembling those found in *C. leuckarti.*

The spinous armature of the terminal segments of the exopods of the swimming feet is represented by the formula 2, 3, 3, 3. In the fourth feet, Fig. 7, the terminal spines of the third segment of the endopod are nearly equal in length.

The membrane connecting the bases of the swimming feet has two rounded processes, each armed with a number of dentations, Figs. 7 and 8. Such pro-

[1] Received February 9, 1932.

Fig. 1. *Cyclops philippinensis*: abdomen of female, x 223. Fig. 2. *Cyclops philippinensis*: first antennae of female, x 223. Fig. 3. *Cyclops philippinensis*: furca and furcal setae of female, x 223. Fig. 4. *Cyclops philippinensis*: second antenna, x 438. Fig. 5. *Cyclops philippinensis*: fifth foot, x 438. Fig. 6. *Cyclops philippinensis*: second segment of posterior maxillipede, x 438. Fig. 7. *Cyclops philippinensis*: fourth foot, x 223. Fig. 8. *Cyclops philippinensis*: connecting membrane of fourth feet, x 438.



Figs. 1–8. *Cyclops philippinensis.* For explanation see page 182.

jections were reported by Schmeil,[2] 1892, as found in the fourth feet of *C. oithonoides*, but not on feet 1 to 3. He also stated that the processes were found in *C. hyalina* and *C. dybowskii* on all the swimming feet, but that the processes were more of a semicircular form in these species. It is evident that the processes in *C. philippinensis* correspond more closely to those in *C. hyalina* and *C. dybowskii*, for they are distinctly semi-circular in outline. Sars,[3] 1918, figures similar projections for the fourth feet of *C. crassus*.

The fifth foot, Fig. 5, is two segmented. The second segment is twice as long as broad: the setae are terminal and the inner seta is longer and stouter than the outer. The form of the *receptaculum seminis* could not be clearly distinguished in the available material.

Length: From 0.9 to 1.0 mm.

This was received from Dr. Stillman Wright and was collected by P. B. Sivikis, at Manila, Philippine Islands.

This form evidently belongs to genus *Mesocyclops* Kiefer, and subgenus *Thermocyclops* Kiefer. It is most nearly related to *C. oithonoides* Sars. The lack of hyaline membranes on the terminal segments of the first antennae, the armature of the membrane connecting the bases of the swimming feet, the form and armature of the fifth feet, and the markings of the abdomen separate this from any described species.

[2] Schmeil, 1892, *Deutschlands freilebende Süsswasser-Copepoden-Cyclopidae.* Bibliotheca Zoologica, Vol. 6.

[3] Sars, G. O., 1918. *An account of the Crustacea of Norway.* Vol. VI, Copepoda, Cyclopoida.

ZOOLOGY.—*Notes on* Talorchestia fritzi *Stebbing.*[1] CLARENCE R. SHOEMAKER, U. S. National Museum. (Communicated by W. L. SCHMITT.)

Among some crustacea recently received by the United States National Museum from Professor Manuel Valerio of San José, Costa Rica, were six amphipods of the genus *Talorchestia*, taken on the Pacific coast of Costa Rica. One of the males is undoubtedly *Talorchestia fritzi* described by Mr. T. R. R. Stebbing[2] in 1903 from Isla del Coco, off the Pacific coast of Costa Rica. The two remaining males are somewhat larger and show marked differences in some characters from *T. fritzi*, but in most they agree completely with it. The greatest difference appears in the form of the sixth and seventh joints of the second gnathopods of the male. Fritz Müller[3] has pointed out the differences in form which take place in some of the characters of sexually mature males of *Orchestia tucurauna*. The alteration in the form of the sixth joint of the second gnathopods and the fusion of the first

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[1] Published by permission of the Secretary of the Smithsonian Institution. Received January 29, 1932.

[2] Stebbing, 1903, Proc. U. S. Nat. Mus., vol. XXVI, p. 925, pl. 60.

[3] Fritz Müller, *Facts and Arguments for Darwin*, London, 1869, pp. 79–80.